

Charlie Brewster
2004733

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Question 2

~~Q~~ ~~Q~~

a) $z_1 = 3 + 7j$

$z_2 = 2 - 10j$

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i) $z_1 + z_2$

$(3 + 7j) + (-4 - j)$

$3 + 7j + -4 - j$

$-1 + 6j$

ii) $z_1 - z_2$

$(3 + 7j) - (-4 - j)$

$3 + 7j - -4 - j$

$7 + 8j$

iii) $\frac{z_1}{z_2}$

$z_1 = (3 + 7j) \quad z_2 = (2 - 10j)$

$z_1 \quad \frac{3 + 7j}{2 - 10j} \quad \frac{2 + 10j}{2 + 10j}$

$z_2 \quad \frac{3 + 7j}{2 - 10j} \quad \frac{2 + 10j}{2 + 10j}$

~~Q~~ $\frac{6 + 30j + 14j + 20j^2}{4 + 20j - 20j - 100j^2}$

$\frac{6 + 44j + 20}{4 + 100}$

$\frac{6 + 44j + 20}{4 + 100}$

$4 + 100$

$-64 + 44j$

104

~~XXXXXXXXXX~~ $\frac{-64}{104} + \frac{44j}{104}$